## 

3

2

3

4

5

## WHAT IS CLAIMED IS:

- 1. An object-naming network infrastructure, comprising:
- a central object name server coupled to a computer network and constituting a first hierarchical level; and

peripheral object name servers coupled to said computer network and constituting a second hierarchical level, said central object name server responding to an object name query received from a querying system by directing said querying system to query instead one of said peripheral object name servers in said second hierarchical level, said one of said peripheral object name servers alternatively responding to said query with an object name or directing said querying system to query instead further peripheral object name servers constituting a third hierarchical level.

- 2. The infrastructure as recited in Claim 1 wherein said object name query comprises a unique code associated with said object name.
- 3. The infrastructure as recited in Claim 1 wherein said object name query comprises a 96-bit number derived from an identification tag.

The infrastructure as recited in Claim 1 wherein said object name query comprises information derived from a surface 2 3 acoustic wave identification tag.

4.

THE 2 P 1 1 4 THE TOTAL THE

21

3

- 5. The infrastructure as recited in Claim 1 wherein said 2 querying system contains an object name cache for containing said object name, said querying system directing said object name query 3 to said cache before directing said object name query to said 4 5 central object name server.
  - 6. The infrastructure as recited in Claim 1 wherein at least some of said peripheral object name servers of said second hierarchical level are associated with corresponding object manufacturers.
  - The infrastructure as recited in Claim 1 wherein address spaces of said peripheral object name servers of said second hierarchical level are centrally assigned.
- The infrastructure as recited in Claim 1 wherein address spaces of said further peripheral object name servers of said third 2 3 hierarchical level are assigned by corresponding object 4 manufacturers.

- 9. The infrastructure as recited in Claim 1 wherein said querying system is associated with a tag reader.
- 10. The infrastructure as recited in Claim 1 wherein said computer network is the Internet.

2

3

2

6

- 11. A method of responding to a query for an object name, comprising:
- initially directing said query to a central object name server coupled to a computer network and constituting a first hierarchical level;
  - subsequently directing said query instead to one of peripheral object name servers coupled to said computer network and constituting a second hierarchical level; and

alternatively responding to said query with an object name or directing said query instead to further peripheral object name servers constituting a third hierarchical level.

- 12. The method as recited in Claim 11 wherein said object name query comprises a unique code associated with said object name.
- 13. The method as recited in Claim 11 further comprising a deriving a 96-bit number from an identification tag to form said object name query.
- 14. The method as recited in Claim 11 further comprising
  2 deriving information from a surface acoustic wave identification
  3 tag to form said object name query.

2

- 15. The method as recited in Claim 11 wherein said querying system contains an object name cache for containing said object name, said method further comprising first directing said object name query to said cache before said initially directing.
- 16. The method as recited in Claim 11 wherein at least some of said peripheral object name servers of said second hierarchical level are associated with corresponding object manufacturers.
  - 17. The method as recited in Claim 11 further comprising centrally assigning address spaces of said peripheral object name servers of said second hierarchical level.
  - 18. The method as recited in Claim 11 further comprising assigning, by corresponding object manufacturers, address spaces of said further peripheral object name servers of said third hierarchical level.
  - 19. The method as recited in Claim 11 wherein said querying system is associated with a tag reader.
- 20. The method as recited in Claim 11 wherein said computer network is the Internet.

2

3

2

3

4

- 21. An object-naming network infrastructure, comprising:
- a central object name server coupled to the Internet and constituting a first hierarchical level; and

peripheral object name servers coupled to the Internet, associated with corresponding object manufacturers and constituting a second hierarchical level, said central object name server responding to an object name query received from a querying system by directing said querying system to query instead one of said peripheral object name servers in said second hierarchical level, said one of said peripheral object name servers alternatively responding to said query with an object name or directing said querying system to query instead further peripheral object name servers constituting a third hierarchical level.

- 22. The infrastructure as recited in Claim 21 wherein said object name query comprises a unique code associated with said object name.
- 23. The infrastructure as recited in Claim 21 wherein said object name query comprises a 96-bit number derived from an identification tag.

- 24. The infrastructure as recited in Claim 21 wherein said object name query comprises information derived from a surface acoustic wave identification tag.
- 25. The infrastructure as recited in Claim 21 wherein said querying system contains an object name cache for containing said object name, said querying system directing said object name query to said cache before directing said object name query to said central object name server.
  - 26. The infrastructure as recited in Claim 21 wherein address spaces of said peripheral object name servers of said second hierarchical level are centrally assigned.

HICKRYSI CHERCES

4

- 27. The infrastructure as recited in Claim 21 wherein address spaces of said further peripheral object name servers of said third hierarchical level are assigned by said corresponding object manufacturers.
- 28. The infrastructure as recited in Claim 21 wherein said querying system is associated with a tag reader.